

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing of claims in the application.

Claims 1-39 (Cancelled)

40. (New) A proofing head assembly comprising:

a) a color light analyzer;

b) a color printhead;

c) a housing joining the printhead to the color light analyzer and directing the printhead and color light analyzer at a media plane and

d) a controller to operate the color light analyzer to make color measurements of an image and to instruct the printhead to render images on a receiver media;

wherein said controller calculates color adjustments using color measurement data from said color light analyzer and adjusts the colors printed by the printhead to match the visual appearance of an image printed by the printhead to the appearance of the same image as printed by another printer.

41. (New) A proofing head assembly as claimed in claim 40, wherein said controller calculates color adjustments by comparing color data measured from a printed image to baseline color data.

42. (New) A proofing head assembly as claimed in claim 40, wherein said controller instructs the printhead to print a color having known image code values and said color light analyzer to measure the color printed by the printhead in response to said image code values and to adjust the operation of the printhead based upon the measured colors.

43. (New) A proofing head assembly as claimed in claim 40 wherein said controller uses said color light analyzer to measure the colors printed by the printhead on a receiver media to verify that the colors printed on the receiver media visually match the instructions sent to the printhead.

44. (New) A proofing head assembly as claimed in claim 40 wherein said controller compares the color data measured from an image during the printing of an image to the colors that the printhead was instructed to render and provides a signal if the comparison indicates that the colors do not match.

45. (New) A proofing head assembly as claimed in claim 40, wherein said controller adjusts the operation of the printhead during printing operations to cause the colors in the printed image to conform to the colors that the printhead was instructed to print.

46. (New) A proofing head assembly as claimed in claim 40, wherein said controller receives data representing an image to be printed and converts this data into printing instructions for the printhead that are modified in accordance with color calibration and characterization adjustments.

47. (New) A proofing head assembly as claimed in claim 46, wherein said controller further comprises a color calibrator to compare the color values measured from a test image printed by the printhead to known color values associated with the test image and to determine calibration adjustments based on this comparison.

48. (New) A proofing head assembly as claimed in claim 46, wherein said controller further comprises a color processor to compare the color values measured from a test image printed by another device to known color values associated with the test image and to determine characterization adjustments based on this comparison.

49. (New) A proofing head assembly as claimed in claim 46, wherein said controller further comprises a color calibrator to receive color measurement data from the light analyzer at particular locations on a calibration test image printed by the printhead and to calculate calibration adjustments by comparing the color values measured at a particular location of a test image printed by the printhead to known color values associated with that location on the test image.

50. (New) A proofing head assembly as claimed in claim 46, wherein said controller further comprises a color processor to receive color measurement data from the light analyzer at particular locations on a characterization test image printed by another device and to calculate characterization adjustments by comparing the color values measured at a particular location of a test image printed by another device to known color values associated with that location on the test image.

51. (New) The print head of claim 40, wherein said housing comprises a closed frame.

52. (New) The proofing head of claim 51, wherein said housing has an interior chamber to contain the printhead and the color light analyzer and further comprises an opening to permit ink from the printhead to pass to the outside of the housing and to further permit light to pass to the color light analyzer.

53. (New) The proofing head of claim 40, wherein said housing defines a cavity for containing said printhead, said controller, and said color light analyzer, and said cavity defines an opening to permit ink to pass from the printhead onto a media and said cavity further permits light to pass between the color light analyzer and the media.

54. (New) The proofing head of claim 53, wherein said housing rigidly joins said color light analyzer and said color printhead.

55. (New) A proofing head assembly comprising:

- a) a spectrophotometer ;
- b) a color printhead; and
- c) a controller;

wherein said spectrophotometer, said color printhead and said controller are joined to form an integral assembly wherein said controller calculates color adjustments using color measurement data from said color light analyzer and adjusts the colors printed by the printhead to match the visual appearance of an image printed by the printhead to the appearance of the same image as printed by another printer.

56. (New) The proofing head assembly of claim 55, wherein said printhead, said controller and said spectrophotometer are rigidly joined to form an integral assembly.

57. (New) A proofing printer assembly for proofing an encoded image, said proofing printer comprising:

a proofing head having a color light analyzer and a color printhead joined by a housing that directs the printhead and color light analyzer at a media;

a media advance to position the media relative to the proofing head assembly;

a controller to operate the proofing head assembly, the translation mechanism and the media advance; and

a controller operable to drive the color light analyzer to make color measurements of an image and to instruct the printhead to render images on a receiver media;

wherein said controller calculates color adjustments using color measurement data from said color light analyzer and adjusts the colors printed by the printhead to match the visual appearance of an image printed by the printhead to the appearance of the same image as printed by another printer.

58. (New) A proofing printer assembly as claimed in claim 57, wherein said controller calculates color adjustments by comparing color data measured from a printed image to baseline color data.

59. (New) A proofing printer assembly as claimed in claim 57, wherein said controller instructs the printhead to print an image having known image code values and measures the colors printed by the printhead in response to said code values and to adjust the operation of the printhead while the image is printing.

60. (New) A proofing printer assembly as claimed in claim 57, wherein said controller uses said spectrophotometer to measure the colors printed by the printhead on a receiver media to verify that the colors printed on the media visually match the color printing instructions sent to the printhead.

61. (New) A proofing printer assembly as claimed in claim 57, wherein said controller compares the color data measured from an image during the printing of an image to the colors that the printhead was instructed to render and provides a signal if the comparison indicates that the colors do not match.

62. (New) A proofing printer assembly as claimed in claim 57, wherein said controller adjusts the operation of the printhead during printing operations to cause the colors in the printed image to conform to the colors that the printhead was instructed to print.

63. (New) A proofing printer assembly as claimed in claim 57, wherein said controller receives data representing an image to be printed and converts this data into printing instructions for the printhead that are modified in accordance with color calibration and characterization adjustments.